

FIG. 1 PRODUCT CYCLE

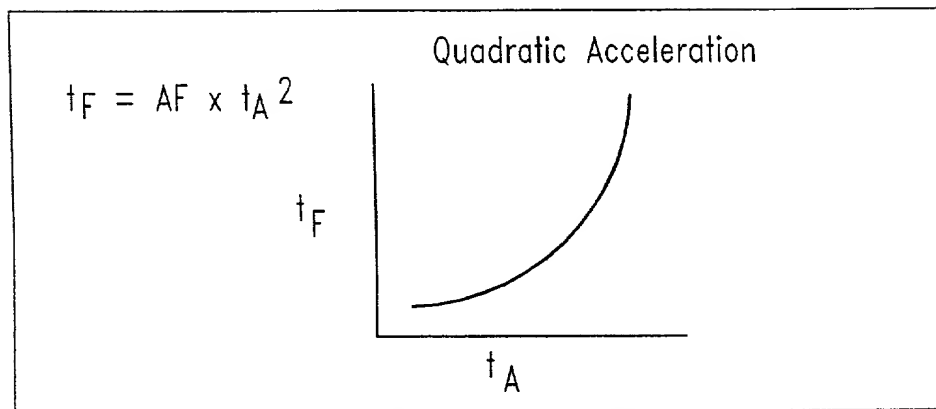
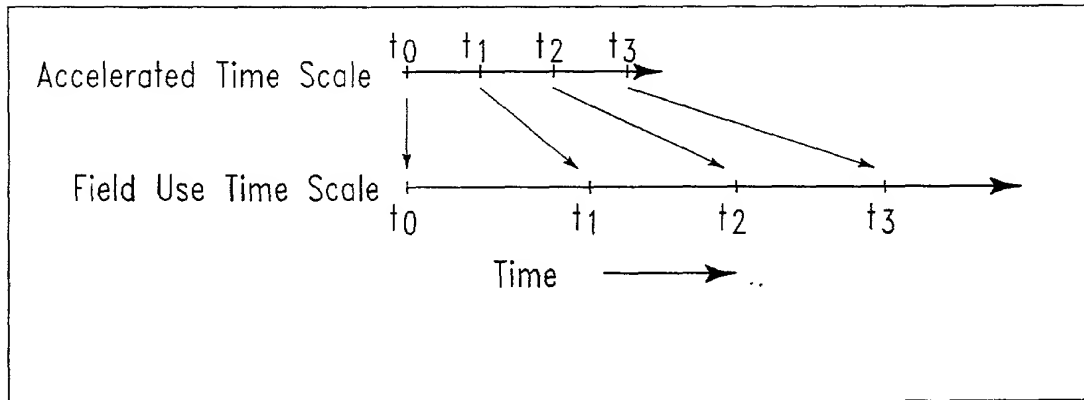


FIG. 2 Quadratic Acceleration



Correlation between Accelerated and Field Use Time Scales

FIG. 3

## Unit A

	CSS	HSS	RT	Vib	CE
HALT 1 First Failure (time to failure in minutes)	120	81	14	53	55.5
HALT 2 First Failure (time to failure in minutes)	91.5	90.5	63	83.5	87
$\hat{R}_i$ (see eq. 4)	0.58	1.25	20.25	2.48	2.46
$\hat{R}_i^*$ (see eq. 5)	-.54	.22	3.01	0.91	0.90

 $\bar{R}^*$  (see eq. 6) 0.90

 $\bar{R}$  (see eq. 7) 2.46 ← ESTIMATE FOR RELATIVE LIFE R

BOM MTBF 298462

MTBF for Redesigned Unit 734221  
(see eq. 12)90% Confidence Limits for R  
(see eq. 11)

Lower Limit 0.17

Upper Limit 35.1

FIG. 4

## Unit B

	CSS	HSS	RT	Vib	CE
HALT 1 First Failure (time to failure in minutes)	73.5	83	89	50	11
HALT 2 First Failure (time to failure in minutes)	121.5	83	13.5	110	13.5
$\hat{R}_i$ (see eq. 4)	2.73	1.00	0.02	4.84	1.51
$\hat{R}_i^*$ (see eq. 5)	1.01	0.00	-3.77	1.58	0.41

$$\bar{R}^* \text{ (see eq. 6)} \quad -0.16$$

$\bar{R}$ (see eq. 7)	0.86	← ESTIMATE FOR RELATIVE LIFE R
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BOM MTBF 232000

MTBF for Redesigned Unit 199520

(see eq. 12)

90% Confidence Limits for R

(see eq. 11)

Lower Limit 0.06

Upper Limit 12.23

FIG. 5

## Unit C

	CSS	HSS	RT	Vib	CE
HALT 1 First Failure (time to failure in minutes)	89	72	33	73	49
HALT 2 First Failure (time to failure in minutes)	112	78	100	63.5	19.83
$\hat{R}_i$ (see eq. 4)	1.58	1.17	9.18	0.76	0.16
$\hat{R}_i^*$ (see eq. 5)	0.46	0.16	2.22	-0.28	-1.81

$$\bar{R}^* \text{ (see eq. 6)} \quad 0.15$$

$\bar{R}$ (see eq. 7)	1.16	← ESTIMATE FOR RELATIVE LIFE R
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BOM MTBF 363300

MTBF for Redesigned Unit 421428

(see eq. 12)

90% Confidence Limits for R

(see eq. 11)

Lower Limit 0.08

Upper Limit 16.61

FIG. 6